Title (en)

PROCESS FOR RECOVERY OF CUMENE HYDROPEROXIDE DECOMPOSITION PRODUCTS BY DISTILLATION

Title (de)

VERFAHREN ZUR RÜCKGEWINNUNG VON CUMENHYDROPEROXIDZERSETZUNGSPRODUKTEN DURCH DESTILLATION

Title (fr)

PROCESSUS DE RECUPERATION PAR DISTILLATION DE PRODUITS DE DECOMPOSITION D'HYDROPEROXYDE DE CUMENE

Publication

EP 1948595 A4 20101013 (EN)

Application

EP 06827726 A 20061110

Priority

- US 2006043848 W 20061110
- US 27341105 A 20051114

Abstract (en)

[origin: US7186866B1] Products from the decomposition of cumene hydroperoxide (CHP) are recovered by distillation. The majority of the undesirable by-product acetol (hydroxyacetone) is removed from the phenol stream by distillation wherein the majority of the acetol is carried with an overheads stream comprising acetone, cumene and alphamethylstyrene (AMS). Acetol is subsequently separated from acetone by distillation wherein acetone is taken as an overheads stream and acetol remains with a bottoms stream comprising cumene, AMS and phenol. The acetol, along with residual phenol, is extracted from the cumene and AMS by counter-current washing with an aqueous alkali metal hydroxide. The phenol stream is then distilled to separate phenol from cumene, alphamethylstyrene and higher boiling compounds. The phenol, containing only a small amount of acetol, can then be treated to remove methylbenzofuran by treatment with an acidic resin or solid superacid catalyst without formation of significant amounts of additional methylbenzofuran.

IPC 8 full level

C07C 409/10 (2006.01); **C07C 407/00** (2006.01)

CPC (source: EP)

C07C 37/08 (2013.01); **C07C 37/72** (2013.01); **C07C 37/74** (2013.01); **C07C 37/82** (2013.01); **C07C 45/53** (2013.01); **C07C 45/80** (2013.01); **C07C 45/82** (2013.01)

C-Set (source: EP)

1. **C07C 37/08** + **C07C 39/04**
2. **C07C 37/74** + **C07C 39/04**
3. **C07C 37/72** + **C07C 39/04**
4. **C07C 37/82** + **C07C 39/04**

Citation (search report)

- [Y] US 2002066661 A1 20020606 - SCHWARZ CHRISTOPH [DE], et al
- [Y] US 2005034970 A1 20050217 - SCHWARZ CHRISTOPH [DE], et al
- [Y] EP 0040985 B1 19830727
- [Y] WO 02090303 A1 20021114 - SUNOCO INC R&M [US]
- See also references of WO 2007058962A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

US 7186866 B1 20070306; CN 101309901 A 20081119; CN 101309901 B 20120815; EP 1948595 A1 20080730; EP 1948595 A4 20101013; JP 2009515967 A 20090416; KR 101012157 B1 20110207; KR 20080056006 A 20080619; TW 200724524 A 20070701; TW I311132 B 20090621; WO 2007058962 A1 20070524

DOCDB simple family (application)

US 27341105 A 20051114; CN 200680042369 A 20061110; EP 06827726 A 20061110; JP 2008541241 A 20061110; KR 20087011173 A 20061110; TW 95136938 A 20061004; US 2006043848 W 20061110